



NFC-Tag Network

Preface

In 2010 the Berlin artist Aram Bartholl published the [Dead Drop Project](#). The aim of the action was to create an anonymous offline P2P file distribution network in public space. USB sticks were embedded in the walls of buildings and public places for this purpose. These could then be recorded with data by persons using a laptop or similar hardware. The lack of anonymity, the effort for the hardware and the change from file distribution to message transmission should be considered and revised in the project.

Task definition

The Dead Drops project is to be revised so that the overall concept meets the new requirements. The work focuses on the project goals that are decisive for the completion of the project. The anonymity of users will be further developed, considering various techniques and procedures. The installation of the hardware is simplified and limited to a minimum of effort. The aim is to reduce costs. The last task involves switching from file distribution to messaging.

Research

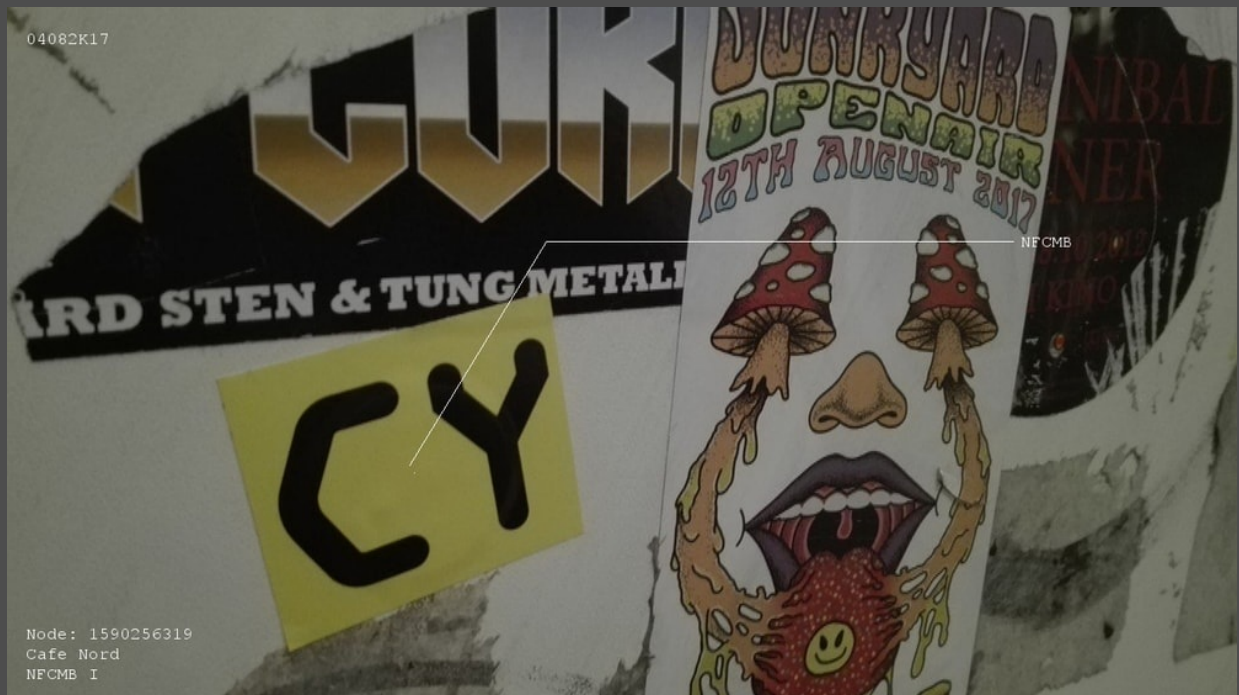
To get a more detailed overview of the installation process of a dead drop, this information was studied first. The following points have emerged as worth considering. The installation of the hardware takes a lot of time. For the installation quite a lot of materials have to be bought and brought to the installation point. A dead drop user must have at least the appropriate hardware (laptop) to access the USB stick embedded in the wall. In most cases, access is cumbersome to difficult and cannot be anonymous.

Materials

After several reviews of different data transmission standards, near field communication (NFC) was classified as relevant for the project. This removes some of the points mentioned above. The NTAG2162 is inexpensive (pcs./1.00€), easy to install on site, requires few [additional materials](#) and the tag can be accessed via smartphone. It was decided against the laptop, because nowadays a majority of people use a smartphone, which usually cannot be claimed by a laptop. Disadvantageously it turns out that the NFC tag can be read by most smartphones without software, but an additional app must be installed to describe it.

In order to communicate with the NFC tag and to keep the project effort as low as possible, external software solutions were accessed. The [NFCMessageBoard](#) app was installed to save and retrieve messages. The software is an open source application that can be downloaded free of charge from the Internet. To secure our tag sticker against manipulations, we still need the [DangerousNFCBeta](#). The backup is done with a password. One problem is that users need to have the expertise of an app installation and other information. In addition, the user manual can only be transmitted via the Internet or verbally. This problem should be reconsidered after the project has been completed.

During the research of the positions some points could be defined more exactly. In order to achieve the greatest possible effect, places should be selected that have a scene or suitable target group. These include trendy bars, pubs, etc. To increase anonymity, toilets were selected as settlement points. WCs have an established cultural background through toilet slogans. We transport this preliminary information to our project by giving users the opportunity to contact other communication partners offline via their smartphone. In addition, care was taken to ensure that the tag is integrated into the surroundings and thus merges with the town. This is intended to increase the service life of the tags against vandalism. The following positions have been selected:



Location: 51.4618290, 7.0138393



Location: 51.4328331, 6.8804648



Location: 51.4635694, 7.0037018

Outlook

Since NFC technology is still in its infancy in Germany and has not yet spread among the population, a representative result cannot be assumed. Although attention has been paid to reach the largest possible target group, they can only find out about the project if they read this documentation or speak to the project manager personally. People who see one of the stickers and can see the NFC tag below it would be able to access the sticker tag. After six months it should be checked again if the tags are still at the installation position and if the tags were used (i.e. if there are messages on the tags) only after that a final conclusion of the project can be published.

Conclusion

After another check in the field, all stickers (except for University of Essen) were still available. Unfortunately, no data could be extracted because no one described it. This project has failed. If you want to carry out a project in this form again, you have to increase the digital attention and the number of stickers in order to generate a statistical relevance. Nevertheless, even on a very small scale it can be indicated that near-field communication outside the economy is not in the focus of subcultures and can therefore rather be described as a niche product.